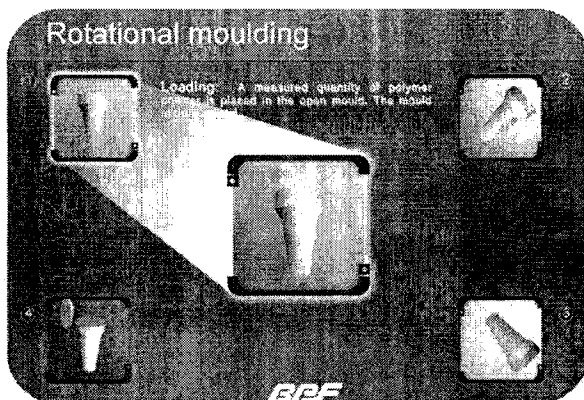


Rotational Moulding



We are grateful to the Rotomoulder Balmoral for their assistance in compiling this page. For more information go to www.balmoraltanks.com or e-mail tanks@balmoral.co.uk



[Click Here To View Large Animation](#)

Overview

Rotational moulding (often referred to as Rotamoulding or Rotomoulding) is a process used for producing hollow plastic products. By using additional post-moulding operations, complex components can be produced enabling the process to compete effectively with other moulding and extrusion practices.

Rotational moulding differs from other processing methods in that the heating, melting, shaping, and cooling stages all occur after the polymer is placed in the mould, therefore no external pressure is applied during forming.

This provides the following advantages:

- Economically produced large products
- Minimum design constraints
- Stress-free products
- No polymer weld lines
- Comparatively low mould costs

To visit the BPF Rotational Moulding page [Click Here](#)



A range of Rotamoulded Tanks

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EXAMPLES OF ROTAMOULD
PRODUCTS](#)

The Process

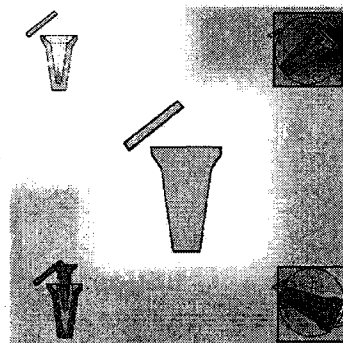
The Rotational Moulding process is essentially split into four operations:

Charging Mould

A pre-determined amount of polymer powder is placed in the mould. With the powder loaded, the mould is closed, locked and loaded into the oven. The powder can be pre-compounded to the desired colour.

Heating & Fusion

Once inside the oven, the mould is rotated around two axis, tumbling the powder – the process is not a centrifugal one. The speed of rotation is relatively slow, less than 20 rev/min. The ovens are heated by convection, conduction and, in some cases, radiation. As the mould becomes hotter the powder begins to melt and stick to the inner walls of the mould. As the powder melts, it gradually builds up an even coating over the entire surface.



Cooling

When the melt has been consolidated to the desired level, the mould is cooled either by air, water or a combination of both. The polymer solidifies to the desired shape.

Unloading/Demoulding

When the polymer has cooled sufficiently to retain its shape and be easily handled, the mould is opened and the product removed. At this point powder can once again be placed in the mould and the cycle repeated.

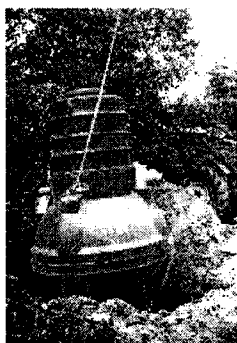
Typical Materials Used

Polyethylene (Low Density)
LDPE, LLDPE

Polypropylene
PP

Ethylene Vinyl Acetate
EVA

Polyvinyl Chloride
PVC




Typical Products Produced

Manhole inspection chambers
Rainwater tanks
Slides and climbing frames
Diesel fuel tanks
Childrens playhouses
Traffic cones
Canoes and kayaks
Pallets

[CLICK HERE FOR MORE EXAMPLES OF ROTAMOULDED PRODUCTS](#)

Rotational Moulders Matrix

This matrix lists all the members of the BPF Rotational Moulders Group, giving details of exactly what they do and services that they offer. If you are interested in finding out more about any of the Suppliers' services please click on their name.

	Amberol	Bainnoral Tanks	Container Components	Crompton Mouldings	JEC Manufacturing	JSC Rotational	Kingspan	Lunpac	Mallbox Mouldings	Rotational Mouldings	Rototek	RPS	Coatila Plastics
Materials													
Nylon	X					X				X	X		X
Polyethylene	X	X	X		X	X	X	X	X	X	X	X	X
Polypropylene	X			X	X			X		X	X	X	X
Market Sectors													
Automotive				X	X	X				X	X		
Farm and Garden		X		X	X	X				X	X	X	X
Furniture	X									X	X		X
General Industry			X	X		X		X	X	X	X	X	X
Tanks - High Spec		X		X	X		X		X	X	X		X
Tanks - Low Spec				X	X	X	X		X	X	X		X
Packaging				X					X	X	X		X
Sports & Leisure				X		X				X	X		X
Machine Type													
Carousel	X	X	X	X	X				X	X		X	X
Shuttle	X			X				X	X	X	X		X
Rocking Oven / Open Flame		X				X	X			X			
Oven Size													
1m - 2m	X												X
2m - 3m				X	X	X							X

3m - 4m			X				X	X	X			X	X
Above 4m		X								X	X		
Services													
Tool Design	X		X	X	X	X			X	X	X		X
Tool Manufacture				X	X	X					X		
Rapid Prototyping Facilities				X		X					X		X
Silkscreen Printing			X						X				X
In - Mould Labelling	X			X		X		X	X	X	X		X
Assembly	X	X		X	X	X	X	X	X	X	X	X	
Machining	X			X	X	X			X	X	X		
Welding					X	X				X			

Contact A Rotational Moulder

Complete the form below if you are looking for a rotational moulded product. The British Plastics Federation will, on your behalf send this to the leading rotational moulders who will contact you if they can supply the product



We are grateful to the Rotomoulder Balmoral for their assistance in compiling this page.
For more information go to www.balmoraltanks.com or e-mail tanks@balmoral.co.uk

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